

VENT STRUCTURE FOR SLOTTED OUTLET
WITH UNIFORM VELOCITY PROFILE

Abstract of the Disclosure

5 A vent structure comprises an inlet-connector section, an outlet section, and a transition section between the inlet-connector section and outlet section. The inlet-connector section is at an inlet end of the vent structure and is adapted for connection with an inlet duct from which the vent structure receives a flow of air. The outlet section is at an outlet end of the vent structure and includes an outlet slot that is adapted to direct the flow of air into a room. The transition section has a flared portion that diverges in cross-sectional area as it extends generally toward the outlet section. The transition section has a constricted portion located between the inlet-connector section and the outlet slot. The constricted portion is also located substantially centrally within a plane that is generally perpendicular to a direction of air flow. The constricted portion is adapted to restrict the flow of air through a central portion of the transition section, thereby restricting the flow of air exiting a corresponding central portion of the outlet slot to provide a more uniform velocity profile of exiting air.

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